

**ENVIRONMENTAL RESOLUTIONS, INC.**

April 15, 2005

Mr. Magdy Baiady  
California Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013

**Subject: Quarterly Report for the First Quarter 2005**  
Mobil Station 18LBF  
19248 Victory Boulevard  
Reseda, California  
CRWQCB Case No. 913350834A

Mr. Baiady:

At the request of ExxonMobil Oil Corporation (ExxonMobil), formerly Exxon Company, U.S.A., Environmental Resolutions, Inc. is submitting the First Quarter 2005 ExxonMobil Quarterly Report for the above-referenced site. The format utilized for the report consolidates groundwater sampling (where applicable), Title 23, Subchapter 16 reporting and consultant progress updates for ExxonMobil into one summary report.

Please call me at (949) 457-7999 if you have any questions.

Sincerely,  
Environmental Resolutions, Inc.

Patrick J. Toelkes  
Project Manager  
P.G. 7155

cc: Ms. Jeneé Briggs, ExxonMobil

**QUARTERLY GROUNDWATER MONITORING REPORT SUMMARY SHEET**

**FIRST QUARTER 2005**

**Mobil Station 18LBF, 19248 Victory Boulevard, Reseda, California**

**ERI 3236**

<b>SITE INFORMATION:</b>	
Responsible Party / Contact:	ExxonMobil Oil Corporation / Ms. Jeneé Briggs (310) 212-2904
Responsible Party Address:	3700 West 190th Street, TPT2-4, Torrance, California 90504
Station / Site ID:	18LBF
Current Site Use:	Operating Mobil gasoline service station
Global ID:	T0603702234
Lead Regulatory Agency/Case#/Case Worker:	CRWQCB/ 913350834A/ Magdy Baiady (213) 576-6699
Date of Most Recent Regulatory Letter:	December 29, 2004
Primary Consultant / Project Manager:	Environmental Resolutions, Inc. / Mr. Patrick J. Toelkes (949) 457-7999
Well Monitoring Contractor:	Environmental Resolutions, Inc.
Site Monitoring Frequency:	Quarterly
Well(s) and/or Subsurface Water Within 2,000 ft.:	Los Angeles River (500 ft north)
Number of Groundwater Wells On Site:	4
Number of Groundwater Wells Off Site:	None
Phase of Vadose Investigation:	Assessed
Phase of Groundwater Investigation:	Monitoring and sampling/delineation
Nature of Impact:	Gasoline

**SITE HYDROLOGY**

Number of Water Zones:	1
Depth to Groundwater Range (ft.)	15.12 - 15.86
Potentiometric Surface Elevation Range (ft-MSL):	725.99 - 726.96
Qtrly Change in Avg. Groundwater Elevation (ft):	3.54 ft increase
Flow Direction/Hydraulic Gradient (ft/ft):	Northeast / 0.01 ft/ft

**FIELD ACTIVITY (CURRENT QUARTER):**

		<b>Wells with LPH:</b>	
		<b>Well</b>	<b>Feet</b>
Groundwater Monitoring Date:	01/26/05	None	N/A
Groundwater Wells Gauged:	4		
Groundwater Wells Sampled:	4		
Sampling Method:	Purge		
Gallons of Groundwater Purged:	141		
Treatment Method / Disposal Facility:	Crosby & Overton		
Analysis:	TPHg and methanol by EPA Method 8015B; BTEX and fuel oxygenates by EPA Method 8260B; DIPE by EPA Method 8260/SA05-77.		

**GROUNDWATER CONDITIONS:**

No. of wells with Detectable Benzene:	3	Benzene Range (ug/l):	<1.00 - 138
No. of wells with Detectable TPHg:	4	TPHg Range (ug/l):	285 - 5,020
No. of wells with Detectable MTBE:	4	MTBE Range (ug/l):	399 - 2,920
No. of wells with Detectable TBA:	4	TBA Range (ug/l):	113 - 117,000

**ADDITIONAL INFORMATION:**

Quarterly groundwater monitoring began at the site in the third quarter 2003.

**WORK PERFORMED THIS QUARTER:**

Groundwater monitoring and sampling of 4 wells.

**QUARTERLY GROUNDWATER MONITORING REPORT SUMMARY SHEET**  
**FIRST QUARTER 2005**  
**Mobil Station 18LBF, 19248 Victory Boulevard, Reseda, California**  
**ERI 3236**

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**TREND ANALYSIS:**

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Groundwater elevations increased by an average of 3.54 feet since the fourth quarter 2004.

Dissolved phase benzene is localized to the vicinity of the former USTs with the maximum concentration detected in groundwater monitoring well MW04 at 138 micrograms per liter ( $\mu\text{g/l}$ ).

Dissolved phase MTBE was detected in each of the monitoring wells. Well MW04 had the highest concentration of MTBE at 2,920  $\mu\text{g/l}$ .

Dissolved phase TBA was detected in each of the monitoring wells. Groundwater monitoring well MW01 had the highest concentration of TBA at 117,000  $\mu\text{g/l}$ .

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**ACTIVITIES PERFORMED THIS QUARTER:**

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Conducted quarterly groundwater monitoring and sampling.

Prepared and submitted quarterly groundwater monitoring report for first quarter 2005 to the CRWQCB.

Submitted to the CRWQCB a work plan dated February 2, 2005 for the installation of four groundwater monitoring wells and dual-phase extraction feasibility testing.

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**ACTIVITIES PROPOSED NEXT QUARTER:**

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Conduct quarterly groundwater monitoring and sampling.

Prepare and submit the quarterly groundwater monitoring report for second quarter 2005 to the CRWQCB.

Submit a work plan for feasibility testing and the installation of four off-site groundwater monitoring wells to the CRWQCB.

Compile and submit additional ownership and investigation information requested by the CRWQCB.

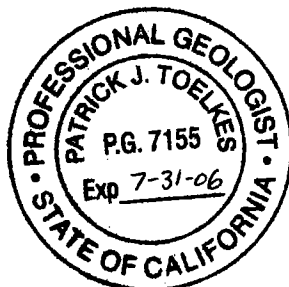
For any questions, please call Ms. Jeneé Briggs with ExxonMobil at (310) 212-2904 or Mr. Patrick J. Toelkes with ERI at (949) 457-7999.

Respectfully submitted,



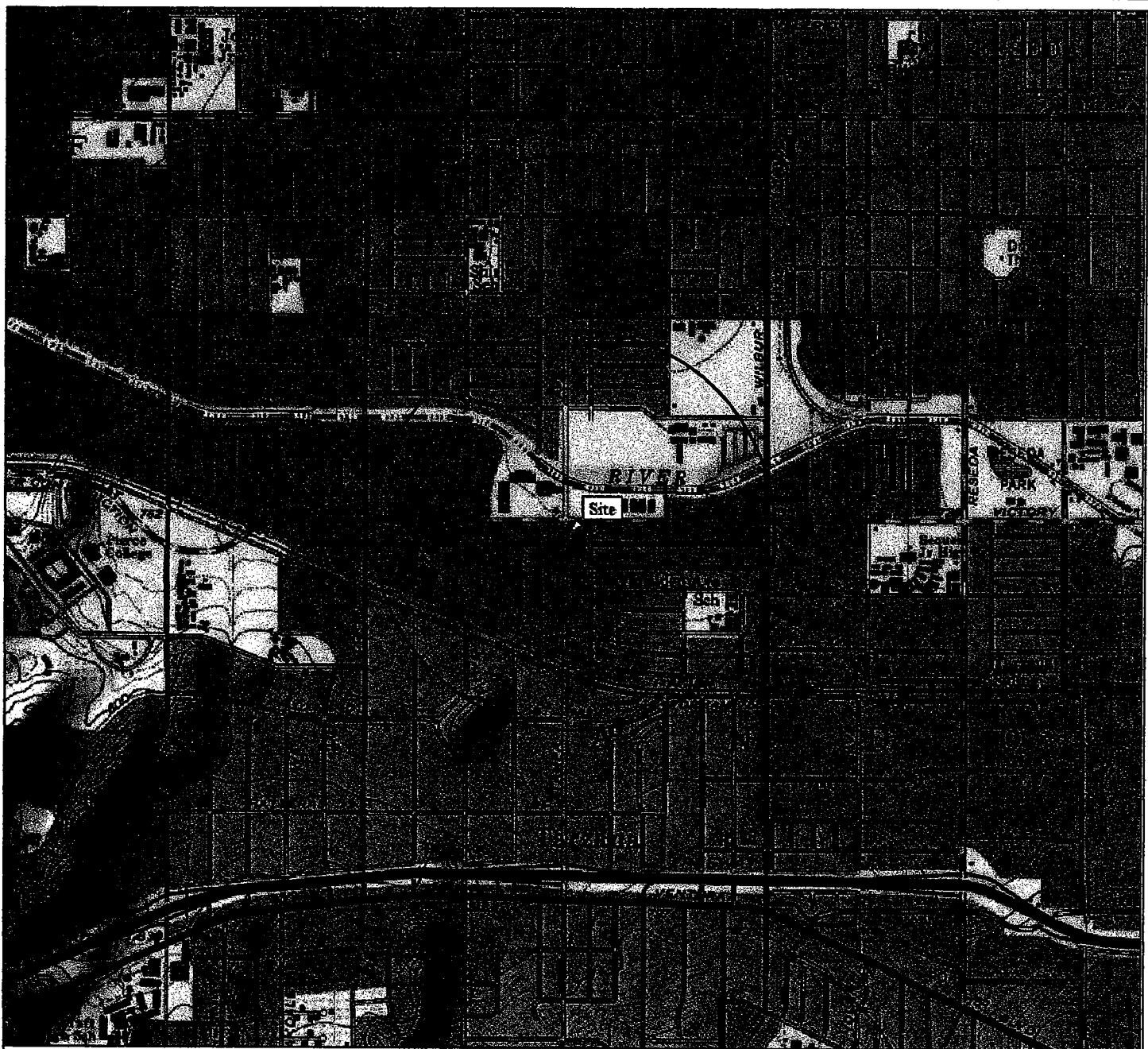
Patrick J. Toelkes

P.G. 7155



**ATTACHED:**

- Site Location Map (Plate 1)
- Site Vicinity Map (Plate 2)
- Groundwater Contour Map – 01/26/05 (Plate 3)
- MTBE Groundwater Isopleth Concentration Map – 01/26/05 (Plate 4)
- Groundwater Sample Analyses Map – 01/26/05 (Plate 5)
- Groundwater Monitoring and Sampling Schedule and Well Construction Details (Table 1)
- Water Level Measurements and Groundwater Analyses (Table 2)
- Cumulative Water Level Measurements and Groundwater Analyses (Table 3)
- Laboratory Report and Chain-of-Custody Record
- Groundwater Sampling Field Log
- ERI Groundwater Monitoring and Sampling Field Protocol

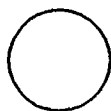


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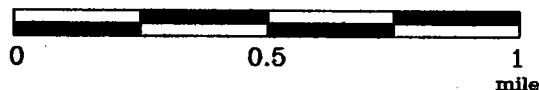
Map Name: Canoga Park, CA  
Version: 1987

# EXPLANATION



1/2-mile radius circle

# APPROXIMATE SCALE



SOURCE:  
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National Geographic's TOPO!



# SITE LOCATION MAP

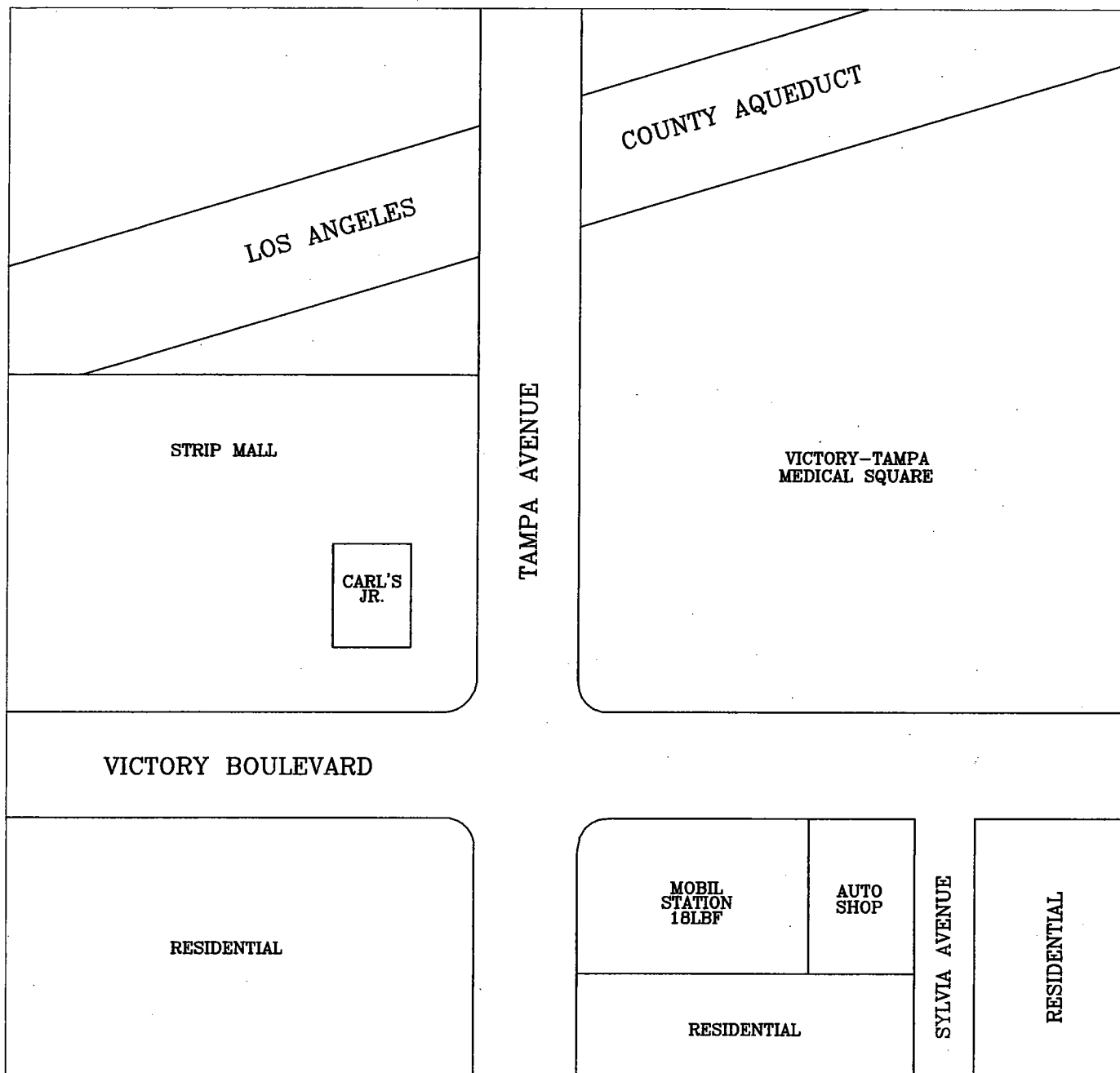
MOBIL STATION 18LBF  
19248 Victory Boulevard  
Reseda, California

PROJECT NO.

3236

PLATE

1

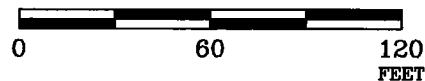


FN 32360003

# **EXPLANATION**



## **APPROXIMATE SCALE**



SOURCE:  
Modified from a map  
provided by  
Holguin, Fahan & Associates, Inc.



## **SITE VICINITY MAP**

MOBIL STATION 18LBF  
19248 Victory Boulevard  
Reseda, California

**PROJECT NO.**

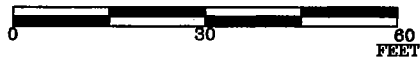
3236

**PLATE**

2

DATE: 02/25/05

APPROXIMATE SCALE

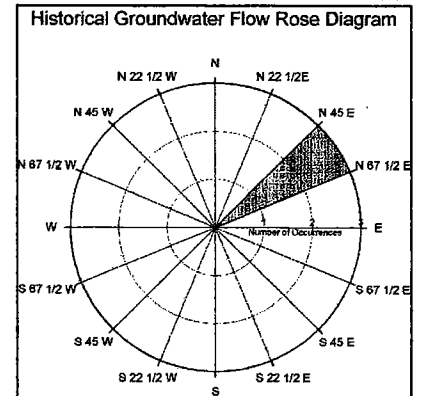
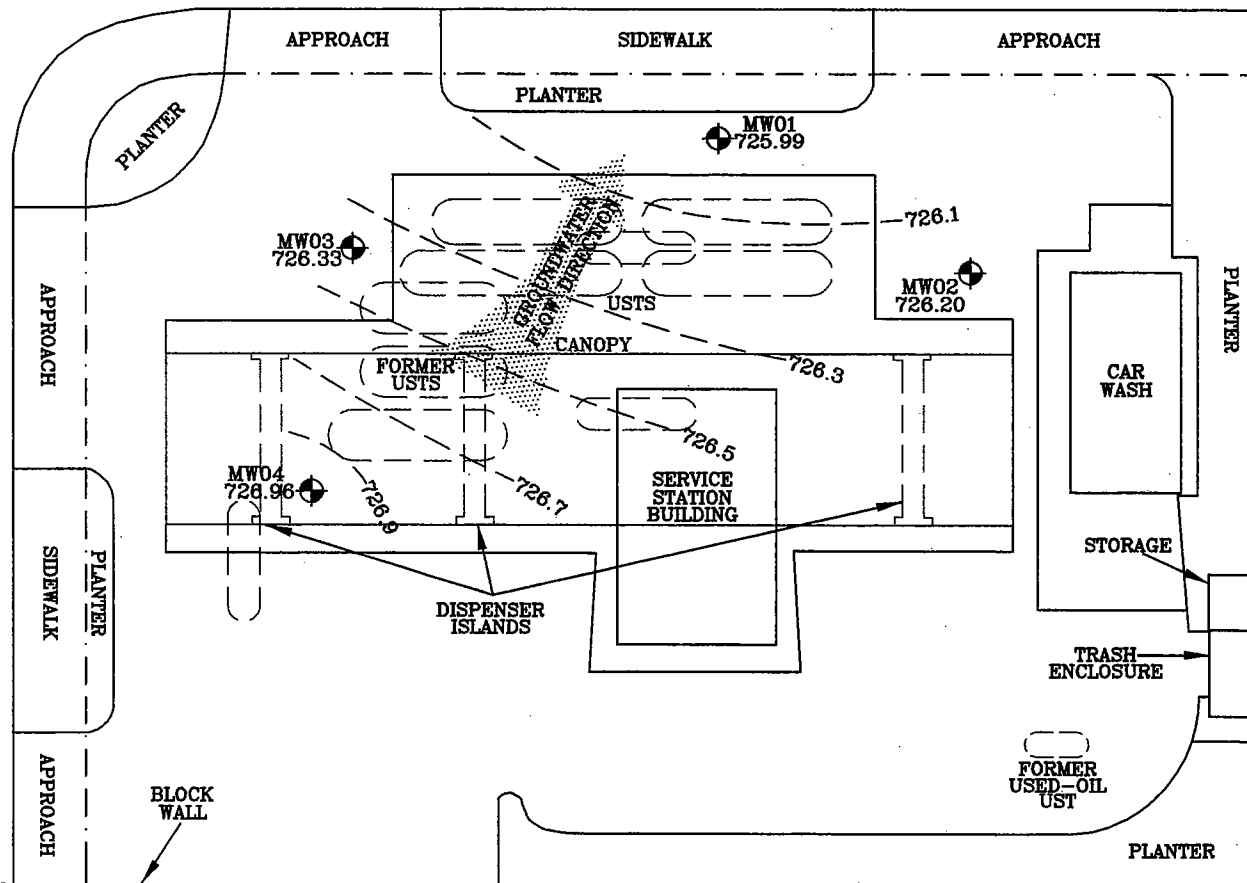


VICTORY BOULEVARD

SOURCE:  
Modified from a map  
provided by  
Holguin, Fahan & Associates, Inc.



TAMPA AVENUE



ABANDONED BUILDING  
19236 VICTORY BOULEVARD  
(FORMER LIQUOR STORE)

FN 32360002



# GROUNDWATER CONTOUR MAP 01/26/05

MOBIL STATION 18LBF  
19248 Victory Boulevard  
Reseda, California

## EXPLANATION

- MW04 Groundwater monitoring well
- 726.96 Groundwater elevation (feet, relative to mean sea level)
- Line of equal groundwater elevation
- Former dispenser island

PROJECT NO.

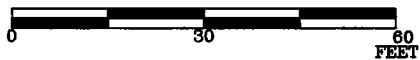
3236

PLATE

3

DATE: 03/18/06

# APPROXIMATE SCALE

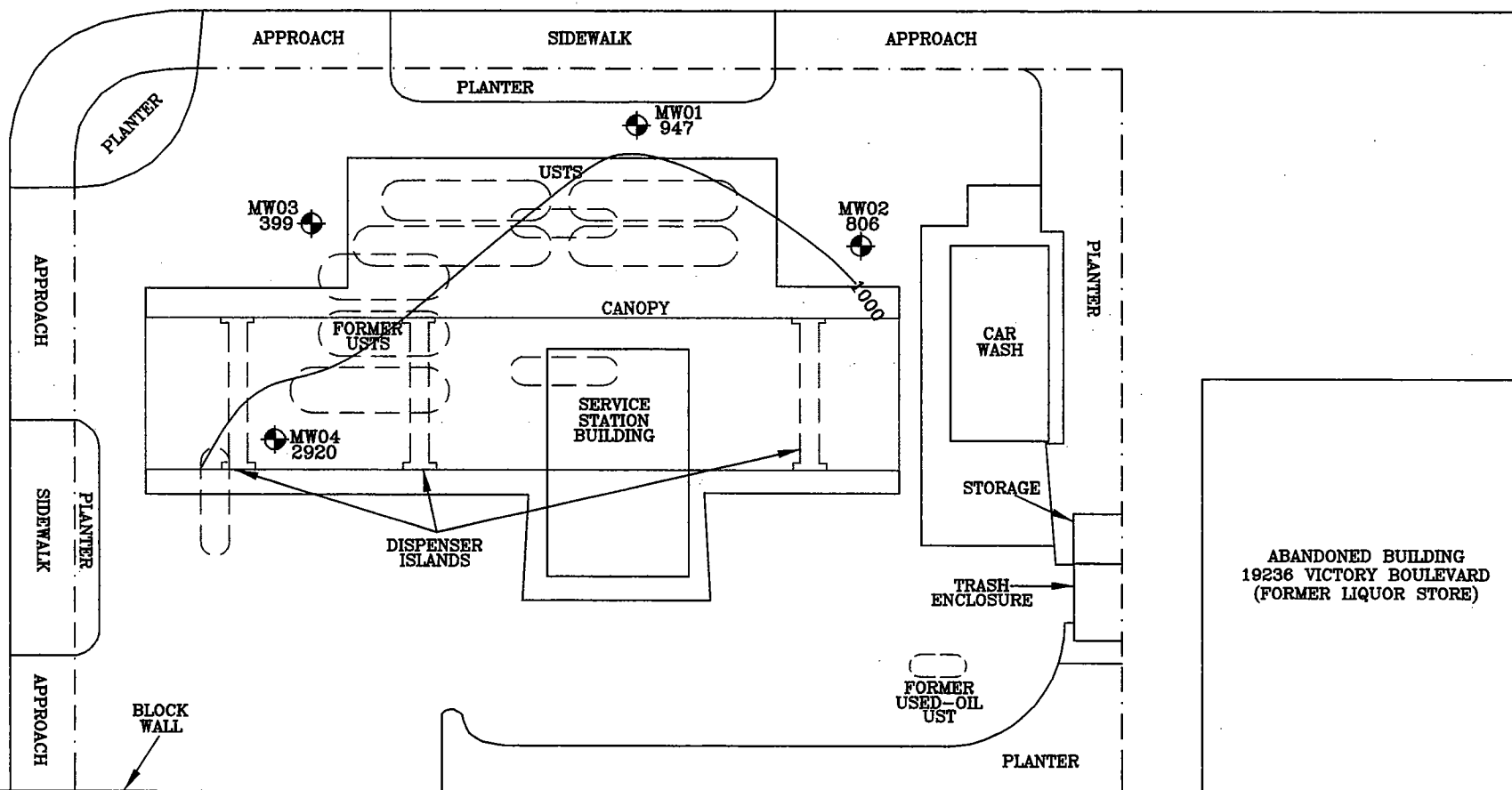


## VICTORY BOULEVARD

SOURCE:  
Modified from a map  
provided by  
Holguin, Fahan & Associates, Inc.



TAMPA AVENUE



FN 32360002



### MTBE GROUNDWATER ISOPLETH CONCENTRATION MAP - 01/26/05

MOBIL STATION 18LBF  
19248 Victory Boulevard  
Reseda, California

#### EXPLANATION

- ◆ MW04 Groundwater monitoring well
- 2920 MTBE concentration in ug/l
- Line of equal MTBE concentration
- Former dispenser island

#### PROJECT NO.

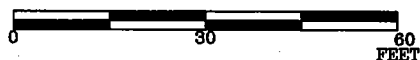
3236

#### PLATE

4

DATE: 02/25/05

# APPROXIMATE SCALE

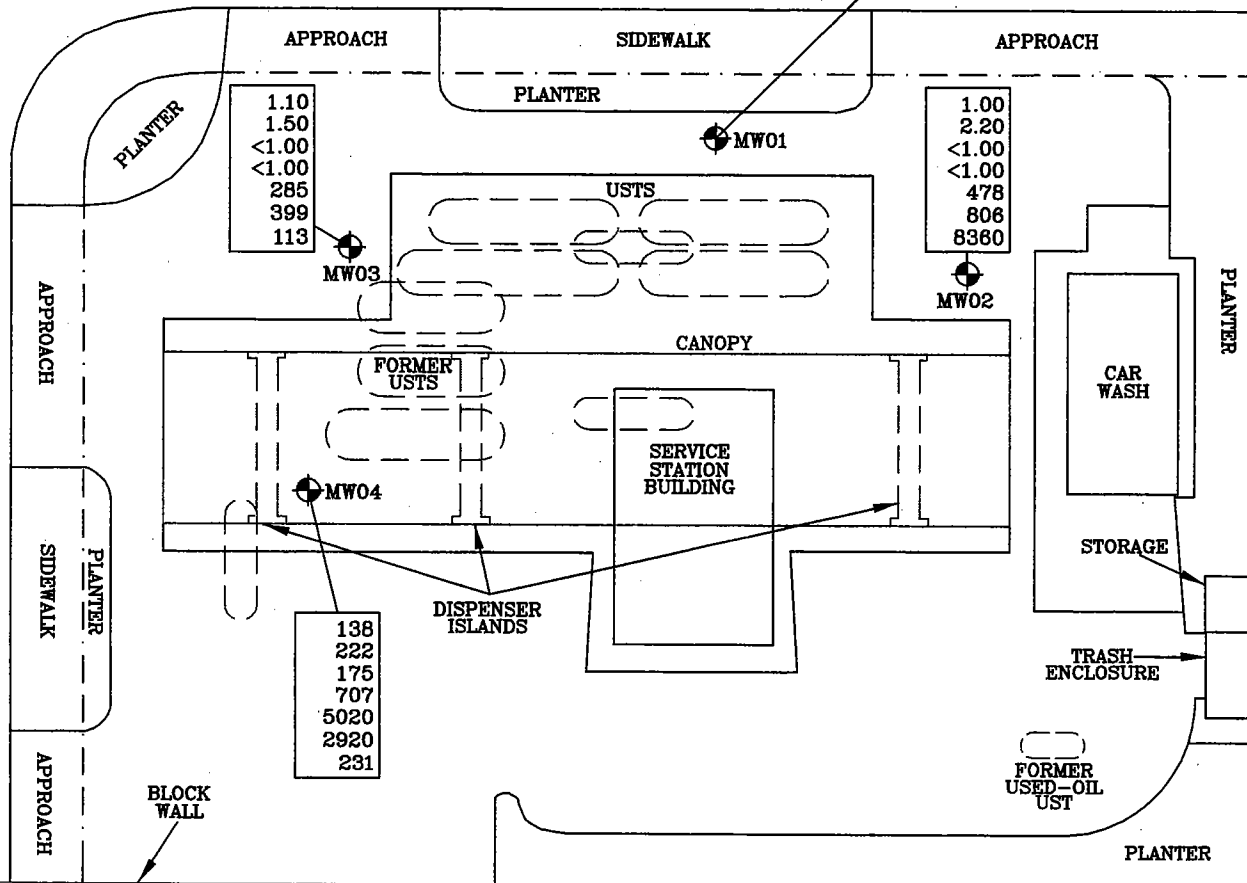


VICTORY BOULEVARD

SOURCE:  
Modified from a map  
provided by  
Holguin, Fahan & Associates, Inc.



TAMPA AVENUE



<1.00  
<1.00  
<1.00  
<1.00  
998  
947  
117000

1.10  
1.50  
<1.00  
<1.00  
285  
399  
113

1.00  
2.20  
<1.00  
<1.00  
478  
806  
8360

138  
222  
175  
707  
5020  
2920  
231

<1.00 Benzene concentration in ug/l  
<1.00 Toluene concentration in ug/l  
<1.00 Ethylbenzene concentration in ug/l  
<1.00 Total xylenes concentration in ug/l  
<50.0 Total petroleum hydrocarbons as gasoline concentration in ug/l  
<2.00 Methyl tertiary butyl ether concentration in ug/l  
<10.0 Tertiary butyl alcohol concentration in ug/l

<1.00 Less than the stated laboratory reporting limit  
ug/l Micrograms per liter

ABANDONED BUILDING  
19236 VICTORY BOULEVARD  
(FORMER LIQUOR STORE)

FN 32360002



## GROUNDWATER SAMPLE ANALYSES MAP 01/26/05

MOBIL STATION 18LBF  
19248 Victory Boulevard  
Reseda, California

### EXPLANATION

- MW04 Groundwater monitoring well
- Former dispenser island

PROJECT NO.

3236

PLATE

5

DATE: 02/26/05



TABLE 1  
GROUNDWATER MONITORING AND SAMPLING SCHEDULE  
AND WELL CONSTRUCTION DETAILS  
MOBIL STATION 18LBF  
19248 VICTORY BOULEVARD  
RESEDA, CALIFORNIA  
ERI 3236

CURRENT MONITORING WELL SAMPLING/ACTIVITY SCHEDULE			
WELL NUMBER	WELL ACTIVITY	FREQUENCY OF GAUGING	FREQUENCY OF SAMPLING
MW01	P	quarterly	quarterly
MW02	P	quarterly	quarterly
MW03	P	quarterly	quarterly
MW04	P	quarterly	quarterly

NP = no-purge

P = purge

WELL CONSTRUCTION INFORMATION				
WELL ID	INSTALL DATE	CASING/BOREHOLE DIAMETER	SCREENED INTERVAL (ft)	TOTAL DEPTH (ft)
MW01	09/17-18/03	4"/10"	10-39.5	40
MW02	09/18/03	4"/10"	10-39.5	40
MW03	09/19/03	4"/10"	10-39.5	40
MW04	09/19/03	4"/10"	10-39.5	40

TOTAL DEPTH = depth of boring

TABLE 2  
WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES  
MOBIL STATION 18LBF  
19248 VICTORY BOULEVARD  
RESEDA, CALIFORNIA  
ERI 3236

MW01	ELEV:	741.85						
DATE	GW DEPTH	GW ELEV.	B	T	E	X	TPHg	MTBE
01/26/05	15.86	725.99	<1.00	<1.00	<1.00	<1.00	998	947
MW02	ELEV:	741.98						
DATE	GW DEPTH	GW ELEV.						
01/26/05	15.78	726.20	1.00	2.20	<1.00	<1.00	478	806
MW03	ELEV:	741.75						
DATE	GW DEPTH	GW ELEV.						
01/26/05	15.42	726.33	1.10	1.50	<1.00	<1.00	285	399
MW04	ELEV:	742.08						
DATE	GW DEPTH	GW ELEV.						
01/26/05	15.12	726.96	138	222	175	707	5020	2920

**EXPLANATION:**

Results reported in micrograms per liter (ug/l).

GW = groundwater

ELEV = elevation

B = benzene; T = toluene; E = ethylbenzene; X = total xylene isomers; TPHg = total petroleum hydrocarbons as gasoline

Methyl tertiary butyl ether (MTBE) analyzed by EPA Method 8260B.

<1.00 = not detected at or above the stated laboratory reporting limit

TABLE 3  
CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES  
MOBIL STATION 18LBF  
19248 VICTORY BOULEVARD  
RESEDA, CALIFORNIA  
ERI 3236

Date	Well Elev	GW Depth	GW Elev	LPH	Benzene (ug/l)	Toluene (ug/l)	Ethyl- benzene (ug/l)	Xylenes (ug/l)	TPHg (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	Ethanol (ug/l)	Methanol (ug/l)
<b>Field Point MW01</b>																
9/30/2003	741.85	18.60	723.25	no	<0.50	0.30J	<0.50	<0.50	1120	103	<0.50	<0.50	<0.50	536		
11/5/2003	741.85	18.77	723.08	no	<0.50	<0.50	<0.50	<0.50	141	125	<0.50	0.30J	<0.50	1970		
2/4/2004	741.85	18.80	723.05	no	<0.50	<0.50	<0.50	<0.50	<50.0	581	<0.50	1.70J	<0.50	16300		
5/19/2004	741.85	18.51	723.34	no	<1.00	<1.00	<1.00	<1.00	2430	3480	<1.00	8.20	2.90	100000		
7/29/2004	741.85	19.07	722.78	no	<1.00	<1.00	<1.00	<1.00	537	355	<1.00	2.70	<1.00	34400		
10/18/2004	741.85	19.26	722.59	no	<1.00	<1.00	<1.00	<1.00	1470	635	<1.00	8.80	<1.00	39200		
1/26/2005	741.85	15.86	725.99	no	<1.00	<1.00	<1.00	<1.00	998	947	<1.00	8.00	<1.00	117000	<1000	20900
<b>Field Point MW02</b>																
9/30/2003	741.98	18.77	723.21	no	<0.50	0.30J	<0.50	<0.50	98.1	39.9	<0.50	<0.50	<0.50	327		
11/5/2003	741.98	18.90	723.08	no	<0.50	<0.50	<0.50	<0.50	181	192	<0.50	<0.50	<0.50	916		
2/4/2004	741.98	18.87	723.11	no	<0.50	<0.50	<0.50	<0.50	1340	375	<0.50	<0.50	<0.50	1330		
5/19/2004	741.98	18.62	723.36	no	<1.00	<1.00	<1.00	<1.00	186	222	<1.00	<1.00	<1.00	872		
7/29/2004	741.98	19.20	722.78	no	<1.00	<1.00	<1.00	<1.00	1120	1330	<1.00	2.10	1.00	35700		
10/18/2004	741.98	19.43	722.55	no	<1.00	<1.00	<1.00	<1.00	881	725	<1.00	<1.00	1.40	9100		
1/26/2005	741.98	15.78	726.20	no	1.00	2.20	<1.00	<1.00	478	806	<1.00	1.20	<1.00	8360	<1000	<10000
<b>Field Point MW03</b>																
9/30/2003	741.75	18.20	723.55	no	29.5	5.80	2.80	260	5910	5570	<0.50	0.60	10.2	2340		
11/5/2003	741.75	18.38	723.37	no	1.00	<0.50	0.30J	2.00	339	449	<0.50	<0.50	0.50	165		
2/4/2004	741.75	18.42	723.33	no	1.40	<0.50	<0.50	<0.50	3590	8650	<0.50	0.30J	7.10	971		
5/19/2004	741.75	18.11	723.64	no	15.5	<1.00	48.2	1.50	12900	23400	<1.00	<1.00	33.0	14400		
7/29/2004	741.75	18.63	723.12	no	<1.00	2.20	2.50	8.80	3820	4660	<1.00	<1.00	6.40	838		

**TABLE 3**  
**CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES**  
**MOBIL STATION 18LBF**  
**19248 VICTORY BOULEVARD**  
**RESEDA, CALIFORNIA**  
**ERI 3236**

<i>Date</i>	<i>Well Elev</i>	<i>GW Depth</i>	<i>GW Elev</i>	<i>LPH</i>	<i>Benzene (ug/l)</i>	<i>Toluene (ug/l)</i>	<i>Ethyl- benzene (ug/l)</i>	<i>Xylenes (ug/l)</i>	<i>TPHg (ug/l)</i>	<i>MTBE (ug/l)</i>	<i>DIPE (ug/l)</i>	<i>ETBE (ug/l)</i>	<i>TAME (ug/l)</i>	<i>TBA (ug/l)</i>	<i>Ethanol (ug/l)</i>	<i>Methanol (ug/l)</i>
10/18/2004	741.75	18.83	722.92	no	1.60	<1.00	4.70	<1.00	2530	2110	<1.00	<1.00	4.90	810		
1/26/2005	741.75	15.42	726.33	no	1.10	1.50	<1.00	<1.00	285	399	<1.00	<1.00	<1.00	113	<1000	<10000
<b>Field Point</b>	<b>MW04</b>															
9/30/2003	742.08	18.06	724.02	no	44.0	58.0	62.0	1310	8380	406	<10.0	<10.0	<10.0	78.0J		
11/5/2003	742.08	18.31	723.77	no	32.8	47.6	22.6	366	2140	838	<0.50	<0.50	0.80	103		
2/4/2004	742.08	18.36	723.72	no	78.7	37.1	85.8	246	1760	1520	<0.50	0.30J	3.80	402		
5/19/2004	742.08	17.97	724.11	no	1780	2030	2020	7220	71800	70000	<50.0	<50.0	65.0	8300		
7/29/2004	742.08	18.57	723.51	no	109	150	143	410	4870	2580	<1.00	<1.00	3.00	340		
10/18/2004	742.08	18.80	723.28	no	67.0	123	67.8	325	3190	1430	<1.00	<1.00	2.50	623		
1/26/2005	742.08	15.12	726.96	no	138	222	175	707	5020	2920	<1.00	<1.00	3.90	231	<1000	<10000
<b>Field Point</b>	<b>TRIP BLANK</b>															
9/30/2003				no	<0.50	<0.50	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
11/5/2003				no	<0.50	<0.50	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
2/4/2004				no	<0.50	0.30J	<0.50	<0.50	<50.0	<0.50	<0.50	<0.50	<0.50	<10.0		
5/19/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0		
7/29/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0		
10/18/2004				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	<1.00	<10.0		
1/26/2005				no	<1.00	<1.00	<1.00	<1.00	<50.0	<2.00	<1.00	<1.00	1.30	<10.0	<1000	<10000

**TABLE 3**  
**CUMULATIVE WATER LEVEL MEASUREMENTS AND GROUNDWATER ANALYSES**  
**MOBIL STATION 18LBF**  
**19248 VICTORY BOULEVARD**  
**RESEDA, CALIFORNIA**  
**ERI 3236**

Explanation:

ELEV = elevation

EPA = Environmental Protection Agency

GW = groundwater

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

TPHg = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary butyl ether

MTBE analyzed by EPA Method 82620B.

LPH = liquid phase hydrocarbons (thickness measured in feet)

<10000 = not detected at or above stated laboratory reporting limit

ug/l = micrograms per liter

RP

2/ 4/05

**ENVIRONMENTAL RESOLUTIONS, INC 10229**  
**PAT TOELKES**  
**20372 NORTH SEA CIRCLE**  
**LAKE FOREST, CA 92630**

This report includes the analytical certificates of analysis for all samples listed below. These samples relate to your project identified below:

Project Name: EXXONMOBIL 18-LBF  
Project Number: ERI 3236 13.  
Laboratory Project Number: 404497.

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. Any QC recoveries outside laboratory control limits are flagged individually with an #. Sample specific comments and quality control statements are included in the Laboratory notes section of the analytical report for each sample report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

Sample Identification	Lab Number	Page 1 Collection Date
-----	-----	-----
W-15-MW01	05-A12223	1/26/05
W-15-MW02	05-A12224	1/26/05
W-15-MW03	05-A12225	1/26/05
W-15-MW04	05-A12226	1/26/05
Trip Blank	05-A12227	1/26/05

Sample Identification

Lab Number

Page 2

Collection Date

These results relate only to the items tested.  
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Report Approved By:

Roxanne L. Connor

Report Date: 2/ 4/05

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Michael H. Dunn, M.S., Technical Director  
Pamela A. Langford, Senior Project Manager  
Eric S. Smith, QA/QC Director  
Sandra McMillin, Technical Services

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Kelly S. Comstock, Technical Services  
Roxanne L. Connor, Senior Project Manag

Laboratory Certification Number: 01168CA

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## ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229  
PAT TOELKES  
20372 NORTH SEA CIRCLE  
LAKE FOREST, CA 92630

Lab Number: 05-A12223  
Sample ID: W-15-MW01  
Sample Type: Water  
Site ID: 18-LBF

Project: ERI 3236 13  
Project Name: EXXONMOBIL 18-LBF  
Sampler: GARY DECARLO

Date Collected: 1/26/05  
Time Collected: 12:20  
Date Received: 1/28/05  
Time Received: 8:00  
Page: 1

Purchase Order: 4504267694

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
*ORGANIC PARAMETERS*									
**TPH (Gasoline Range)	998.	ug/l	50.0	1.0	2/ 1/05	16:55	H. Wagner	8015B	3498
*VOLATILE ORGANICS*									
**Ethyl-t-butylether	8.00	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**tert-amyl methyl ether	ND	ug/L	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Tertiary butyl alcohol	117000	ug/l	1000	100.	2/ 3/05	23:36	A. Steimle	8260B	8573
**Benzene	ND	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Ethylbenzene	ND	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Toluene	ND	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Xylenes (Total)	ND	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Methyl-t-butyl ether	947.	ug/l	20.0	10.0	2/ 3/05	22:59	A. Steimle	8260B	8569
Ethanol	ND	ug/L	1000	1.0	2/ 3/05	5:18	A. Steimle	8260B	7921
**Diisopropyl ether	ND	ug/l	1.00	1.0	2/ 3/05	5:18	A. Steimle	8260/SA05-77	7921
*MISCELLANEOUS GC PARAMETERS*									
**Methanol	20900	ug/l	10000	1.0	2/ 2/05	21:15	K. Roberso	8015B	6356

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	104.	69. - 132.
GC FID Surrogate	104.	50. - 150.
VOA Surr 1,2-DCA-d4	106.	73. - 127.

Sample report continued . . .



## ANALYTICAL REPORT

Laboratory Number: 05-A12223  
Sample ID: W-15-MW01  
Project: ERI 3236 13  
Page 2

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Surrogate	% Recovery	Target Range
-----	-----	-----
VOA Surr Toluene-d8	96.	79. - 113.
VOA Surr, 4-BFB	100.	79. - 125.
VOA Surr, DBFM	108.	75. - 134.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.  
\*\* = NELAC E87358 Certified Analyte

End of Sample Report.

## ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229  
PAT TOELKES  
20372 NORTH SEA CIRCLE  
LAKE FOREST, CA 92630

Lab Number: 05-A12224  
Sample ID: W-15-MW02  
Sample Type: Water  
Site ID: 18-LBF

Project: ERI 3236 13  
Project Name: EXXONMOBIL 18-LBF  
Sampler: GARY DECARLO

Date Collected: 1/26/05  
Time Collected: 12:15  
Date Received: 1/28/05  
Time Received: 8:00  
Page: 1

Purchase Order: 4504267694

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
*ORGANIC PARAMETERS*									
**TPH (Gasoline Range)	478.	ug/l	50.0	1.0	2/ 1/05	17:25	H. Wagner	8015B	3498
*VOLATILE ORGANICS*									
**Ethyl-t-butylether	1.20	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**tert-amyl methyl ether	ND	ug/L	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Tertiary butyl alcohol	8360	ug/l	200.	20.0	2/ 3/05	21:26	A. Steimle	8260B	8569
**Benzene	1.00	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Ethylbenzene	ND	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Toluene	2.20	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Xylenes (Total)	ND	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Methyl-t-butyl ether	806.	ug/l	40.0	20.0	2/ 3/05	21:26	A. Steimle	8260B	8569
Ethanol	ND	ug/L	1000	1.0	2/ 3/05	5:36	A. Steimle	8260B	7921
**Diisopropyl ether	ND	ug/l	1.00	1.0	2/ 3/05	5:36	A. Steimle	8260/SA05-77	7921
*MISCELLANEOUS GC PARAMETERS*									
**Methanol	ND	ug/l	10000	1.0	2/ 2/05	21:21	K. Roberso	8015B	6356

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	95.	69. - 132.
GC FID Surrogate	101.	50. - 150.
VOA Surr 1,2-DCA-d4	105.	73. - 127.

Sample report continued . . .

## ANALYTICAL REPORT

Laboratory Number: 05-A12224  
Sample ID: W-15-MW02  
Project: ERI 3236 13  
Page 2

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Surrogate	% Recovery	Target Range
-----	-----	-----
VOA Surr Toluene-d8	99.	79. - 113.
VOA Surr, 4-BFB	102.	79. - 125.
VOA Surr, DBFM	107.	75. - 134.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.

B = Analyte was detected in the method blank.

J = Estimated Value below Report Limit.

E = Estimated Value above the calibration limit of the instrument.

# = Recovery outside Laboratory historical or method prescribed limits.

\*\* = NELAC E87358 Certified Analyte

End of Sample Report.

## ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229  
PAT TOELKES  
20372 NORTH SEA CIRCLE  
LAKE FOREST, CA 92630

Lab Number: 05-A12225  
Sample ID: W-15-MW03  
Sample Type: Water  
Site ID: 18-LBF

Project: ERI 3236 13  
Project Name: EXXONMOBIL 18-LBF  
Sampler: GARY DECARLO

Date Collected: 1/26/05  
Time Collected: 12:25  
Date Received: 1/28/05  
Time Received: 8:00  
Page: 1

Purchase Order: 4504267694

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
*ORGANIC PARAMETERS*									
**TPH (Gasoline Range)	285.	ug/l	50.0	1.0	2/ 1/05	17:56	H. Wagner	8015B	3498
*VOLATILE ORGANICS*									
**Ethyl-t-butylether	ND	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**tert-amyl methyl ether	ND	ug/L	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Tertiary butyl alcohol	113.	ug/l	10.0	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Benzene	1.10	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Ethylbenzene	ND	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Toluene	1.50	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Xylenes (Total)	ND	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Methyl-t-butyl ether	399.	ug/l	20.0	10.0	2/ 3/05	21:45	A. Steimle	8260B	8569
Ethanol	ND	ug/L	1000	1.0	2/ 4/05	12:59	A. Steimle	8260B	8557
**Diisopropyl ether	ND	ug/l	1.00	1.0	2/ 4/05	12:59	A. Steimle	8260/SA05-77	8557
*MISCELLANEOUS GC PARAMETERS*									
**Methanol	ND	ug/l	10000	1.0	2/ 2/05	21:27	K. Roberso	8015B	6356

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	96.	69. - 132.
GC FID Surrogate	108.	50. - 150.
VOA Surr 1,2-DCA-d4	108.	73. - 127.

Sample report continued . . .

## ANALYTICAL REPORT

Laboratory Number: 05-A12225  
Sample ID: W-15-MW03  
Project: ERI 3236 13  
Page 2

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Surrogate	% Recovery	Target Range
-----	-----	-----
VOA Surr Toluene-d8	96.	79. - 113.
VOA Surr, 4-BFB	100.	79. - 125.
VOA Surr, DBFM	107.	75. - 134.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.

B = Analyte was detected in the method blank.

J = Estimated Value below Report Limit.

E = Estimated Value above the calibration limit of the instrument.

# = Recovery outside Laboratory historical or method prescribed limits.

\*\* = NELAC E87358 Certified Analyte

End of Sample Report.

## ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229  
PAT TOELKES  
20372 NORTH SEA CIRCLE  
LAKE FOREST, CA 92630

Lab Number: 05-A12226  
Sample ID: W-15-MW04  
Sample Type: Water  
Site ID: 18-LBF

Project: ERI 3236 13  
Project Name: EXXONMOBIL 18-LBF  
Sampler: GARY DECARLO

Date Collected: 1/26/05  
Time Collected: 12:30  
Date Received: 1/28/05  
Time Received: 8:00  
Page: 1

Purchase Order: 4504267694

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
*ORGANIC PARAMETERS*									
**TPH (Gasoline Range)	5020	ug/l	250.	5.0	2/ 2/05	18:16	H. Wagner	8015B	6355
*VOLATILE ORGANICS*									
**Ethyl-t-butylether	ND	ug/l	1.00	1.0	2/ 3/05	6:14	A. Steimle	8260B	7921
**tert-amyl methyl ether	3.90	ug/L	1.00	1.0	2/ 3/05	6:14	A. Steimle	8260B	7921
**Tertiary butyl alcohol	231.	ug/l	100.	10.0	2/ 4/05	10:35	A. Steimle	8260B	8575
**Benzene	138.	ug/l	1.00	1.0	2/ 3/05	6:14	A. Steimle	8260B	7921
**Ethylbenzene	175.	ug/l	1.00	1.0	2/ 3/05	6:14	A. Steimle	8260B	7921
**Toluene	222.	ug/l	10.0	10.0	2/ 4/05	10:35	A. Steimle	8260B	8575
**Xylenes (Total)	707.	ug/l	10.0	10.0	2/ 4/05	10:35	A. Steimle	8260B	8575
**Methyl-t-butyl ether	2920	ug/l	200.	100.	2/ 4/05	11:12	A. Steimle	8260B	8578
Ethanol	ND	ug/L	1000	1.0	2/ 3/05	6:14	A. Steimle	8260B	7921
**Diisopropyl ether	ND	ug/l	1.00	1.0	2/ 3/05	6:14	A. Steimle	8260/SA05-77	7921
*MISCELLANEOUS GC PARAMETERS*									
**Methanol	ND	ug/l	10000	1.0	2/ 2/05	21:33	K. Roberso	8015B	6356

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	95.	69. - 132.
GC FID Surrogate	109.	50. - 150.
VOA Surr 1,2-DCA-d4	111.	73. - 127.

Sample report continued . . .

## ANALYTICAL REPORT

Laboratory Number: 05-A12226  
Sample ID: W-15-MW04  
Project: ERI 3236 13  
Page 2

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Surrogate -----	% Recovery -----	Target Range -----
VOA Surr Toluene-d8	97.	79. - 113.
VOA Surr, 4-BFB	99.	79. - 125.
VOA Surr, DBFM	109.	75. - 134.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.  
B = Analyte was detected in the method blank.  
J = Estimated Value below Report Limit.  
E = Estimated Value above the calibration limit of the instrument.  
# = Recovery outside Laboratory historical or method prescribed limits.  
\*\* = NELAC E87358 Certified Analyte

End of Sample Report.

## ANALYTICAL REPORT

ENVIRONMENTAL RESOLUTIONS, INC 10229  
PAT TOELKES  
20372 NORTH SEA CIRCLE  
LAKE FOREST, CA 92630

Lab Number: 05-A12227  
Sample ID: Trip Blank  
Sample Type: Water  
Site ID: 18-LBF

Project: ERI 3236 13  
Project Name: EXXONMOBIL 18-LBF  
Sampler: GARY DECARLO

Date Collected: 1/26/05  
Time Collected:  
Date Received: 1/28/05  
Time Received: 8:00  
Page: 1

Purchase Order: 4504267694

Analyte	Result	Units	Report Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
*ORGANIC PARAMETERS*									
**TPH (Gasoline Range)	ND	ug/l	50.0	1.0	2/ 1/05	18:56	H. Wagner	8015B	3498
*VOLATILE ORGANICS*									
**Ethyl-t-butylether	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**tert-amyl methyl ether	1.30	ug/L	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Tertiary butyl alcohol	ND	ug/l	10.0	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Benzene	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Ethylbenzene	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Toluene	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Xylenes (Total)	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Methyl-t-butyl ether	ND	ug/l	2.00	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
Ethanol	ND	ug/L	1000	1.0	2/ 3/05	3:08	A. Steimle	8260B	7921
**Diisopropyl ether	ND	ug/l	1.00	1.0	2/ 3/05	3:08	A. Steimle	8260/SA05-77	7921
*MISCELLANEOUS GC PARAMETERS*									
**Methanol	ND	ug/l	10000	1.0	2/ 2/05	21:46	K. Roberso	8015B	6356

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	83.	69. - 132.
GC FID Surrogate	100.	50. - 150.
VOA Surr 1,2-DCA-d4	101.	73. - 127.

Sample report continued . . .



## ANALYTICAL REPORT

Laboratory Number: 05-A12227  
Sample ID: Trip Blank  
Project: ERI 3236 13  
Page 2

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Surrogate	% Recovery	Target Range
-----	-----	-----
VOA Surr Toluene-d8	99.	79. - 113.
VOA Surr, 4-BFB	103.	79. - 125.
VOA Surr, DBFM	104.	75. - 134.

### LABORATORY COMMENTS:

ND = Not detected at the report limit.

B = Analyte was detected in the method blank.

J = Estimated Value below Report Limit.

E = Estimated Value above the calibration limit of the instrument.

# = Recovery outside Laboratory historical or method prescribed limits.

\*\* = NELAC E87358 Certified Analyte

End of Sample Report.

## PROJECT QUALITY CONTROL DATA

Project Number: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Page: 1

Laboratory Receipt Date: 1/28/05

### Matrix Spike Recovery

Note: If Blank is referenced as the sample spiked, insufficient volume was received for the defined analytical batch for MS/MSD analysis on an true sample matrix. Laboratory reagent water was used for QC purposes.

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
-----								
**UST ANALYSIS**								
TPH (Gasoline Range)	mg/l	< 0.0500	0.926	1.00	93	43. - 150.	3498	blank
TPH (Gasoline Range)	mg/l	< 0.0500	0.826	1.00	83	43. - 150.	6355	'12839
BTEX/GRO Surr., a,a,a-TFT	% Recovery				155	69 - 132	3498	
BTEX/GRO Surr., a,a,a-TFT	% Recovery				99	69 - 132	6355	
**VOA PARAMETERS**								
Benzene	mg/l	< 0.00025	0.0556	0.0500	111	62 - 143	7921	blank
Benzene	mg/l	< 0.00050	0.0554	0.0500	111	62 - 143	8557	14393
Toluene	mg/l	< 0.00017	0.0545	0.0500	109	63 - 141	7921	blank
Toluene	mg/l	< 0.00050	0.0592	0.0500	118	63 - 141	8557	14393
Toluene	mg/l	< 0.00017	0.0568	0.0500	114	63 - 141	8575	blank
VOA Surr 1,2-DCA-d4	% Rec				96	73 - 127	7921	
VOA Surr Toluene-d8	% Rec				100	79 - 113	7921	
VOA Surr, 4-BFB	% Rec				103	79 - 125	7921	
VOA Surr, DBFM	% Rec				103	75 - 134	7921	
Methanol	mg/l	< 10.0	56.9	50.0	114	52. - 133.	6356	05-A12171

### Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
-----						
**UST PARAMETERS**						
TPH (Gasoline Range)	mg/l	0.926	0.920	0.65	27.	3498
TPH (Gasoline Range)	mg/l	0.826	0.983	17.36	27.	6355

Project QC continued . . .

## PROJECT QUALITY CONTROL DATA

Project Number: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Page: 2

Laboratory Receipt Date: 1/28/05

### Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
-----	-----	-----	-----	-----	-----	-----
BTEX/GRO Surr., a,a,a-TFT	% Recovery		154.			3498
BTEX/GRO Surr., a,a,a-TFT	% Recovery		105.			6355
**VOA PARAMETERS**						
Benzene	mg/l	0.0556	0.0460	18.90	27.	7921
Benzene	mg/l	0.0554	0.0540	2.56	27.	8557
Toluene	mg/l	0.0545	0.0442	20.87	34.	7921
Toluene	mg/l	0.0592	0.0570	3.79	34.	8557
Toluene	mg/l	0.0568	0.0416	30.89	34.	8575
VOA Surr 1,2-DCA-d4	% Rec		99.			7921
VOA Surr Toluene-d8	% Rec		98.			7921
VOA Surr, 4-BFB	% Rec		102.			7921
VOA Surr, DBFM	% Rec		105.			7921
**MISC PARAMETERS**						
Methanol	mg/l	56.9	58.6	2.94	50	6356

### Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
-----	-----	-----	-----	-----	-----	-----
**UST PARAMETERS**						
TPH (Gasoline Range)	mg/l	1.00	0.912	91	64 - 130	3498
TPH (Gasoline Range)	mg/l	1.00	0.976	98	64 - 130	6355
BTEX/GRO Surr., a,a,a-TFT	% Recovery			144	69 - 132	3498
BTEX/GRO Surr., a,a,a-TFT	% Recovery			133	69 - 132	6355

Project QC continued . . .

## PROJECT QUALITY CONTROL DATA

Project Number: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Page: 3

Laboratory Receipt Date: 1/28/05

### \*\*VOA PARAMETERS\*\*

Ethyl-t-butylether	mg/l	0.0500	0.0426	85	67 - 140	7921
Ethyl-t-butylether	mg/l	0.0500	0.0517	103	67 - 140	8557
tert-amyl methyl ether	mg/L	0.0500	0.0427	85	68 - 134	7921
tert-amyl methyl ether	mg/L	0.0500	0.0535	107	68 - 134	8557
Tertiary butyl alcohol	mg/l	0.500	0.496	99	28 - 182	7921
Tertiary butyl alcohol	mg/l	0.500	0.530	106	28 - 182	8569
Tertiary butyl alcohol	mg/l	0.500	0.530	106	28 - 182	8573
Tertiary butyl alcohol	mg/l	0.500	0.484	97	28 - 182	8557
Tertiary butyl alcohol	mg/l	0.500	0.628	126	28 - 182	8575
Benzene	mg/l	0.0500	0.0413	83	78 - 123	7921
Benzene	mg/l	0.0500	0.0496	99	78 - 123	8557
Ethylbenzene	mg/l	0.0500	0.0421	84	80 - 124	7921
Ethylbenzene	mg/l	0.0500	0.0574	115	80 - 124	8557
Toluene	mg/l	0.0500	0.0410	82	77 - 124	7921
Toluene	mg/l	0.0500	0.0539	108	77 - 124	8557
Toluene	mg/l	0.0500	0.0413	83	77 - 124	8575
Xylenes (Total)	mg/l	0.150	0.127	85	81 - 124	7921
Xylenes (Total)	mg/l	0.150	0.177	118	81 - 124	8557
Xylenes (Total)	mg/l	0.150	0.132	88	81 - 124	8575
Methyl-t-butyl ether	mg/l	0.0500	0.0450	90	69 - 136	7921
Methyl-t-butyl ether	mg/l	0.0500	0.0498	100	69 - 136	8569
Methyl-t-butyl ether	mg/l	0.0500	0.0494	99	69 - 136	8578
Ethanol	mg/L	5.00	4.16	83	48 - 164	7921
Ethanol	mg/L	5.00	6.49	130	48 - 164	8557
Diisopropyl ether	mg/l	0.0500	0.0407	81	65 - 140	7921
Diisopropyl ether	mg/l	0.0500	0.0487	97	65 - 140	8557
Methanol	mg/l	50.0	59.3	119	69 - 125	6356
VOA Surr 1,2-DCA-d4	% Rec			95	73 - 127	7921
VOA Surr 1,2-DCA-d4	% Rec			102	73 - 127	8569
VOA Surr 1,2-DCA-d4	% Rec			102	73 - 127	8573
VOA Surr 1,2-DCA-d4	% Rec			107	73 - 127	8578
VOA Surr Toluene-d8	% Rec			98	79 - 113	7921
VOA Surr Toluene-d8	% Rec			97	79 - 113	8569
VOA Surr Toluene-d8	% Rec			97	79 - 113	8573
VOA Surr Toluene-d8	% Rec			96	79 - 113	8578

Project QC continued . . .

## PROJECT QUALITY CONTROL DATA

Project Number: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Page: 4

Laboratory Receipt Date: 1/28/05

### Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
-----	-----	-----	-----	-----	-----	-----
VOA Surr, 4-BFB	% Rec			103	79 - 125	7921
VOA Surr, 4-BFB	% Rec			103	79 - 125	8569
VOA Surr, 4-BFB	% Rec			103	79 - 125	8573
VOA Surr, 4-BFB	% Rec			99	79 - 125	8578
VOA Surr, DBFM	% Rec			105	75 - 134	7921
VOA Surr, DBFM	% Rec			106	75 - 134	8569
VOA Surr, DBFM	% Rec			106	75 - 134	8573
VOA Surr, DBFM	% Rec			108	75 - 134	8578

### Duplicates

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch	Sample Dup'd
-----	-----	-----	-----	-----	-----	-----	-----

### Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
-----	-----	-----	-----	-----	-----

### \*\*UST PARAMETERS\*\*

TPH (Gasoline Range)	< 0.0500	mg/l	3498	2/ 1/05	10:43
TPH (Gasoline Range)	< 0.0500	mg/l	6355	2/ 2/05	13:24

Project QC continued . . .

## PROJECT QUALITY CONTROL DATA

Project Number: ERI 3236 13

Project Name: EXXONMOBIL 18-LBF

Page: 5

Laboratory Receipt Date: 1/28/05

BTEX/GRO Surr., a,a,a-TFT	92.	% Recovery	3498	2/ 1/05	10:43
BTEX/GRO Surr., a,a,a-TFT	88.	% Recovery	6355	2/ 2/05	13:24
**VOA PARAMETERS**					
Ethyl-t-butylether	< 0.00027	mg/l	7921	2/ 3/05	1:54
Ethyl-t-butylether	< 0.00027	mg/l	8557	2/ 4/05	12:00
tert-amyl methyl ether	< 0.00030	mg/L	7921	2/ 3/05	1:54
tert-amyl methyl ether	< 0.00030	mg/L	8557	2/ 4/05	12:00
Tertiary butyl alcohol	< 0.00428	mg/l	7921	2/ 3/05	1:54
Tertiary butyl alcohol	< 0.00428	mg/l	8569	2/ 3/05	15:16
Tertiary butyl alcohol	< 0.00428	mg/l	8573	2/ 3/05	15:16
Tertiary butyl alcohol	< 0.00428	mg/l	8557	2/ 4/05	12:00
Tertiary butyl alcohol	< 0.00428	mg/l	8575	2/ 4/05	4:14
Benzene	< 0.00025	mg/l	7921	2/ 3/05	1:54
Benzene	< 0.00025	mg/l	8557	2/ 4/05	12:00
Ethylbenzene	< 0.00019	mg/l	7921	2/ 3/05	1:54
Ethylbenzene	< 0.00019	mg/l	8557	2/ 4/05	12:00
Toluene	< 0.00017	mg/l	7921	2/ 3/05	1:54
Toluene	< 0.00017	mg/l	8557	2/ 4/05	12:00
Toluene	< 0.00017	mg/l	8575	2/ 4/05	4:14
Xylenes (Total)	< 0.00033	mg/l	7921	2/ 3/05	1:54
Xylenes (Total)	< 0.00033	mg/l	8557	2/ 4/05	12:00
Xylenes (Total)	< 0.00033	mg/l	8575	2/ 4/05	4:14
Methyl-t-butyl ether	< 0.00023	mg/l	7921	2/ 3/05	1:54
Methyl-t-butyl ether	< 0.00023	mg/l	8569	2/ 3/05	15:16
Methyl-t-butyl ether	< 0.00023	mg/l	8578	2/ 4/05	4:14
Ethanol	< 0.0307	mg/L	7921	2/ 3/05	1:54
Ethanol	< 0.0307	mg/L	8557	2/ 4/05	12:00
Diisopropyl ether	< 0.00018	mg/l	7921	2/ 3/05	1:54
Diisopropyl ether	< 0.00018	mg/l	8557	2/ 4/05	12:00
VOA Surr 1,2-DCA-d4	99.	% Rec	7921	2/ 3/05	1:54
VOA Surr 1,2-DCA-d4	101.	% Rec	8569	2/ 3/05	15:16
VOA Surr 1,2-DCA-d4	101.	% Rec	8573	2/ 3/05	15:16
VOA Surr 1,2-DCA-d4	107.	% Rec	8578	2/ 4/05	4:14
VOA Surr Toluene-d8	100.	% Rec	7921	2/ 3/05	1:54
VOA Surr Toluene-d8	99.	% Rec	8569	2/ 3/05	15:16
VOA Surr Toluene-d8	99.	% Rec	8573	2/ 3/05	15:16

Project QC continued . . .

**PROJECT QUALITY CONTROL DATA**

**Project Number: ERI 3236 13**

**Project Name: EXXONMOBIL 18-LBF**

**Page: 6**

**Laboratory Receipt Date: 1/28/05**

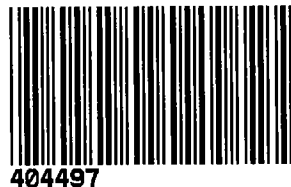
Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Analysis Date	Analysis Time
VOA Surr Toluene-d8	96.	% Rec	8578	2/ 4/05	4:14
VOA Surr, 4-BFB	103.	% Rec	7921	2/ 3/05	1:54
VOA Surr, 4-BFB	103.	% Rec	8569	2/ 3/05	15:16
VOA Surr, 4-BFB	103.	% Rec	8573	2/ 3/05	15:16
VOA Surr, 4-BFB	103.	% Rec	8578	2/ 4/05	4:14
VOA Surr, DBFM	103.	% Rec	7921	2/ 3/05	1:54
VOA Surr, DBFM	104.	% Rec	8569	2/ 3/05	15:16
VOA Surr, DBFM	104.	% Rec	8573	2/ 3/05	15:16
VOA Surr, DBFM	109.	% Rec	8578	2/ 4/05	4:14
Methanol	< 10.0	mg/l	6356	2/ 2/05	19:47

# = Value outside Laboratory historical or method prescribed QC limits.

End of Report for Project 404497

**TestAmerica**  
ANALYTICAL TESTING CORPORATION  
**Nashville Division**



**COOLER RECEIPT FORM**

BC#

Client Name: ERI

Cooler Received/Opened On: 1/28/05 Accessioned By: Shane Gambill

[Signature]  
Log-in Personnel Signature

1. Temperature of Cooler when triaged: 3.2 Degrees Celsius
2. Were custody seals on outside of cooler?..... YES...NO...NA
  - a. If yes, how many, and where: 1 Front
3. Were custody seals on containers?..... NO...YES...NA
4. Were the seals intact, signed, and dated correctly?..... YES...NO...NA
5. Were custody papers inside cooler?..... YES...NO...NA
6. Were custody papers properly filled out (ink, signed, etc)?..... YES...NO...NA
7. Did you sign the custody papers in the appropriate place?..... YES...NO...NA
8. What kind of packing material used? Bubblewrap    Peanuts    Vermiculite    Other    None
9. Cooling process: Ice    Ice-pack    Ice (direct contact)    Dry ice    Other    None
10. Did all containers arrive in good condition (unbroken)?..... YES...NO...NA
11. Were all container labels complete (#, date, signed, pres., etc)?..... YES...NO...NA
12. Did all container labels and tags agree with custody papers?..... YES...NO...NA
13. Were correct containers used for the analysis requested?..... YES...NO...NA
14. a. Were VOA vials received?..... YES...NO...NA
  - b. Was there any observable head space present in any VOA vial?..... NO...YES...NA
15. Was sufficient amount of sample sent in each container?..... YES...NO...NA
16. Were correct preservatives used?..... YES...NO...NA

If not, record standard ID of preservative used here \_\_\_\_\_

17. Was residual chlorine present?..... NO...YES...NA
18. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below:

Fed-Ex

UPS

Velocity

DHL

Route

Off-street

Misc.

19. If a Non-Conformance exists, see attached or comments below:

6046



### 404497

Consultant Name: Environmental Resolutions, Inc.

TA Account #: 10229

Address: 20372 North Sea Circle

Invoice To: Jeneé Briggs

City/State/Zip: Lake Forest, CA 92630

Report To: PAT TOELKES

ExxonMobil Territory Mgr: Jeneé Briggs

PO #: 4504267694

Consultant Project Mgr: PAT TOELKES

Facility ID #: ERI 3236 13 / EXXONMOBIL 18LBF

Consultant Telephone Number: 949-457-8950

Fax No.: 949-457-8956

Site Address: 19248 VICTORY BLVD

Sampler Name: (Print) GARY DECARLO

City, State, Zip: RESEDA, CA

Sampler Signature: Gary DeCarlo

Regulatory District (CA): LARWQCB

Sample ID or Field ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative								Matrix				Analyze For:										Due Date of Report																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
							Methanol	Sodium Bisulfate	HCl (Blue Label)	NaOH ( Orange Label)	H <sub>2</sub> SO <sub>4</sub> Plastic (Yellow Label)	H <sub>2</sub> SO <sub>4</sub> Glass(Yellow Label)	HNO <sub>3</sub> (Red Label)	None (Black Label)	Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	8015M DIESEL	TPH/GAS-8015B	FULL SCAN 8260B +OXYGENATES	METHANOL	ETHANOL	*8260B/BTEX +OXYGENATES ONLY	BTEX/MTBE BY 8021	8010		REDOX POTENTIAL	NITRATE/SULFATE	METHANE(8015)	RUSH TAT (Pre-Schedule)	5 Day TAT request	Fax Results (yes or no)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
W-15-MW01	1/26/05	1220	5						X							X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

Comments/Special Instructions: \*OXYGENATES WHEN REQUESTED ABOVE TO INCLUDE; BTEX, MTBE, DIPE, ETBE, TAME, TBA.

Laboratory Comments:

CONSULTANT ID # ERIL  
GLOBAL ID # T0603702234

"PLEASE E-MAIL ALL EDF FILES TO  
RSHEARER@ERI-US.COM"

Temperature Upon Receipt:

Sample Containers Intact? Y N

VOCs Free of Headspace? Y N

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by (Lab personnel)

Date

Time

QC Deliverables (please circle one)

Level 2

Level 3

Level 4

**5 DAY TURN-AROUND FOR  
EXXONMOBIL REQUIRED**

Site Specific-if yes, please pre-schedule w/ TestAmerica  
Project Manager or attach specific instructions

**PURGING AND SAMPLING - FIELD LOG****CLIENT NAME: EXXONMOBIL 18-LBF****ERI JOB # 3236 13****0.163 FOR A 2" WELL****SITE LOCATION: 19248 VICTORY BLVD****ANALYSIS: TPHg/8260B****0.652 FOR A 4" WELL****FIELD CREW: RO****DATE: 01/26/05****1.167 FOR A 6" WELL**

		DEPTH TO	DEPTH TO	CASE	CASE	PRG			
WELL #	TIME	WATER	WELL	DIA	VOL	VOL	COND.	TEMP	pH
MW02	10:30 AM	15.78	39.82	4	9	27			
	10:45 AM					1	1.89	70.0	7.01
	10:53 AM					9	1.85	70.5	7.09
	11:02 AM					18	1.83	70.8	7.11
	11:11 AM					27	1.81	70.9	7.12
SW	12:15 PM								

**COMMENTS** Water Cloudy

		DEPTH TO	DEPTH TO	CASE	CASE	PRG			
WELL #	TIME	WATER	WELL	DIA	VOL	VOL	COND.	TEMP	pH
MW01	10:33 AM	15.86	31.99	4	9	27			
	10:46 AM					1	1.94	69.8	7.11
	10:54 AM					9	2.00	70.8	7.18
	11:03 AM					18	2.02	71.0	7.20
	11:12 AM					27	2.03	71.1	7.21
SW	12:20 PM	16.05							

**COMMENTS** Water Cloudy

		DEPTH TO	DEPTH TO	CASE	CASE	PRG			
WELL #	TIME	WATER	WELL	DIA	VOL	VOL	COND.	TEMP	pH
MW03	10:36 AM	15.42	37.94	4	14	42			
	11:22 AM					1	1.98	69.5	7.02
	11:35 AM					14	1.96	69.9	7.08
	11:49 AM					28	1.95	70.0	7.10
	12:03 PM					42	1.95	70.1	7.12
SW	12:25 PM								

**COMMENTS** Water Cloudy

		DEPTH TO	DEPTH TO	CASE	CASE	PRG			
WELL #	TIME	WATER	WELL	DIA	VOL	VOL	COND.	TEMP	pH
MW04	10:39 AM	15.12	38.43	4	15	45			
	11:24 AM					1	1.96	70.2	7.15
	11:38 AM					15	1.99	70.5	7.09
	11:53 AM					30	2.01	70.6	7.05
	12:08 PM					45	2.02	70.6	7.03
SW	12:30 PM								

**COMMENTS** Water Cloudy

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## WELL SAMPLING & SURVEYING SOP-5

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### WELL SAMPLING AND SURVEYING

- 1) Open well heads. This may require a socket or a special allen wrench.
- 2) Survey the wells if this hasn't been done before as follows:
  - a) Select a permanent benchmark (e.g. curb at corner of site, property line). Record on "SURVEYGW" form.
  - b) Measure and record rectangular coordinates from benchmark to each well.
  - c) Set up tripod and transit where it can see all wells and the benchmark = Station "A". If you can't see all wells, two transit locations must be used. At least one well surveyed from Station "A" must be resurveyed from Station "B". Preferably, two or more wells are resurveyed.
  - d) Carefully level the tripod using the bubble indicator.
  - e) Place stadia rod on benchmark and record height from crosshair to reference, ( $D_o$ ).
  - f) Place stadia rod on each well (at the notch) and record ht. from well to crosshair, ( $D_w$ ).
  - g) Calculate casing elevation as shown on data sheet SURVEYGW.

To check the accuracy in leveling the transit, set the transit in second spot and repeat steps 2c through 2g. Recalculation of casing elevations should agree within 0.01 ft. or a third placement of the tripod will be required.
- 3) Decon the water level indicator before inserting into each well. Lower indicator until it beeps - raise and lower and mark the level on the tape with your thumb. Estimate level to the nearest 0.01 ft. Note any odor when the probe is withdrawn from the well. Look for the notch or ink mark on the top of the well and measure all levels from that. Notch should be on the highest side of the well pipe. If no side is high, notch should be on the north side. Measure from the casing adjacent to the notch - not from the bottom of the notch. If there is no notch - make one.
- 4) After measuring all water levels, check for a sheen in each well using a bailer. If the stainless bailer is used - decon before inserting into each well. If there is a sheen, do not purge or sample. The presence of liquid phase hydrocarbons means the concentration in the water will be high anyway and the pump will be difficult to get clean enough to avoid contaminating other wells.
- 5) Developing: If the well has not been developed (it is new), surge the well by moving bailer up and down vigorously in the well for about 5 minutes. This will wash silt from the sand pack into the well where it can be removed.
- 6) Pull out as much silt as possible by running the bailer all the way to the bottom and withdrawing. Continue bailing until water is fairly clear or until local regulatory specifications are met. Removal of silt with the bailer will extend the pump life. Contact the Project Manager if water does not clear up by 10 casing volumes.
- 7) Decon pump by washing in TSP/water the rinsing with tap water and rinsing again with deionized water. Then pump clean water through the pump to push out any dirty water.

- 8) Purging: Place pump in well about 2 to 5 feet off bottom. Withdraw at least 3 casing volumes from the well, or until temperature, pH and conductivity stabilize (see local regulations). Be careful not to let the pump run dry. Check level with the water level indicator and slow pump down when water level is within 2 ft of the pump head. While purging, collect a water sample as often as possible and check for pH, conductivity, and temperature. Stable pH and conductivity would indicate the well has been filled with representative groundwater and purging is complete. If well recharges slowly, remove 1.5 casing volumes. Estimate flow rates by recording the time it takes to fill a 5-gallon bucket (1/2 of a 55-gallon barrel, etc.)
- 9) Decon pump thoroughly between each well by repeating step 7.
- 10) Label bottles with a "Sharpie Pen" when they are dry. Label as W-xx-MWy, where xx is water depth below surface in feet and y is well number (refer to SOP-1).
- 11) After the well has been developed, sample the water using a disposable bailer and surgical gloves to prevent oil from your hands from contaminating the sample. Be sure to leave no headspace or bubbles in any water sample to be tested for volatiles. Wells should be sampled within (24) hours of purging and the well should have recovered to within 80% of its volume before purging. (Slow recharge wells need to be addressed with the Project Manager - and may have to be purged slowly). Gasoline contaminated water requires 2 x 40 ml VOA's from each well. Preserve samples by acidifying to pH <2 (usually with two drops of HCl). Water suspected of contamination with oil or diesel requires 2 1-liter samples in amber bottles. Samples contaminated with oil will require 10 drops of H<sub>2</sub>SO<sub>4</sub> for preservation. Samples for organic lead require 2 1-liter amber bottles.
- 12) Place like vials in a baggie and label the baggie. Put vials and baggie in an ice chest and document samples and analyses required on a chain of custody. Take samples to the laboratory the same day samples are collected if possible, at least within 24 hours.
- 13) Clean wellhead gaskets (seals), put locking caps on the wells and replace the covers. Cover and label the drums (if any) of purge and decon water.

<u>Analysis</u>	<u>Bottles</u>	<u>Preservative</u>
8015 mod gasoline/8020(602)	2 x 40 ml VOA	2 drops HCl to pH < 2
8015 mod diesel/8020(602)	2 1-liter & 2 x 40 ml VOA	2 drops HCl to pH < 2 (applied to VOA's)
418.1 (TRPH)	2 1-liter amber	10 drops H <sub>2</sub> SO <sub>4</sub> to pH < 2
Organic Lead	2 1-liter amber	no preservative suggested
HOC - 8010 (601)	2 x 40 ml VOA	no preservative suggested

Items Needed:

Water Level Indicator  
 Bailer  
 Generator  
 Grundfos Pump and Reel  
 Grundfos Pump Control Box  
 Hydac Cond/Temp/pH Meter  
 Liter Bottles  
 VOAs

Items Needed:

Distilled Water  
 3 Buckets  
 Bottle Brush  
 TSP Detergent  
 Stainless Steel Cable or Poly Rope  
 Cooler with Ice  
 Socket set and Allen Wrench (CNI Key)  
 Plastic sheeting

Items Needed for Surveying:

Topcon AT-F7 Transit  
 Tripod  
 Stadia Rod

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QUARTERLY WELL MONITORING  
SOP-6

REV. 10/24/97

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QUARTERLY WELL MONITORING

- 1) Give the site manager advance notification of field activities. Arrange for a sufficient number of drums. Obtain a site plan with the location and ID's of the wells to be monitored and a copy of the table from the last quarterly report with the previous groundwater data.
- 2) Open well heads. This may require a socket or a special allen wrench.
- 3) Measure groundwater depths with water level indicator as per SOP-5 before any other action is taken. If the depth to the bottom of the monitoring well is unknown, reel out the water level indicator until you feel the probe contact the bottom. You may have to raise and lower the probe several times to "feel" contact with the bottom. The probe is not very heavy, and the bottom of the well may have a cushioning layer of silt. Record the depth of the well once you feel confident the probe is at the bottom. Note odors from well.
- 4) Calculate the linear footage of water in each well, by subtracting the depth to water from the total well depth. To obtain the casing volume in gallons, multiply the linear footage by a constant for the given well casing diameter. Typically, three casing volumes are purged from each well prior to sampling. Always Round up - if 3.4 gallons, then purge 4 gallons - if 12.1 gallons, then purge 13 gallons.

<u>Casing diameter</u>	<u>Gallons per linear foot</u>
2"	0.17
4"	0.66
6"	1.50
8"	2.60
- 5) After measuring all water levels, begin purging the wells in order of the cleanest to the most contaminated based on last quarter's data. Well purging procedures are outlined in SOP-5. While wells containing free floating product may not be sampled, the project manager may want the free product removed manually by bailer. Check with the project manager before bailing LPH. You may find that for shallow wells, it may be quicker to bail manually rather than set up the pump. Place purge and decon water in a 55-gallon drum or treat on site. Do not mix purge water from different wells in one drum. Record all purge data on Groundwater Sampling Field Logs. Record "LPH" and the thickness in feet and inches (to nearest 1/16 of an inch) in the comments section if a measurable level of LPH present. If non-measurable amount present then record "Sheen" in the comments section.
- 6) When the well has recovered at least 80% of its' original water level, collect samples using a clean bailer. Make sure the rope is tied securely on the bailer, you don't want to go fishing. Sample in order of the cleanest to the most contaminated. If required, collect field (equipment) blanks.
- 7) Trip blanks are a QA/QC procedure that must be collected at every site. Obtain a trip blank from the laboratory. They will make them up for you. The trip blank to taken unopened to the site and is kept with the other samples in the cooler unopened during the day's sampling. Label the bottle as an arbitrary monitoring well. For example: if there are 5 monitoring wells to be sampled at the site, the trip blank should be labeled as if it were a sample from MW6. The trip blank is never opened and it is used to determine if any contaminants are introduced by the laboratory or during transportation of the samples.
- 8) Field (equipment) blanks are a QA/QC procedure to be collected at the project manager's discretion (or always for LACDPW sites). To collect a field blank decon a bailer thoroughly; pour distilled water into the bailer; pour the distilled water from the bailer into appropriate

sample bottle(s) for the analysis to be performed, allow for no headspace; label the bottle as an arbitrary monitoring well. For example: if there are 5 monitoring wells to be sampled at the site plus a trip blank, and a field blank is to be collected, the field blank should be labeled as if it were a sample from MW7 (the trip blank is MW6). If a disposable bailer is used for sampling, use a new disposable bailer to collect the field blank.

- 9) Label sample containers when they are dry (refer to SOP-1). Place vials from each well in a separate plastic ziplock bag and label the bag. Put bag in an ice chest and document samples and analyses required on a chain of custody (see attached examples).
- 10) Replace the locking caps, and the covers. Cover and label the drums of waste water. Place the drums on site in a location selected by the site manager. Usually, this will be near a dumpster or in the back, away from public view. Labels should face outward.
- 11) Decon all equipment before leaving the site.

In general, groundwater sampling will be performed in accordance with LUFT guidelines. Several local agencies require that groundwater sampling occur under slightly different guidelines. Check with the project manager to find out which sites require special groundwater sampling procedures. Typically, the following apply:

#### Orange County Health Care Agency Requirements

No special requirements. Water sampling will be performed as per the State Water Resources Board's LUFT manual.

#### LARWQCB Groundwater Requirements

- o Purge a minimum of four well volumes if recovery is fast, or one borehole volume if recovery is slow (water does not recover to 80% of original level within two hours).
- o The last three readings must be within 10% for conductivity, temperature, and pH to show stabilization. This means that all three consecutive readings must be within these limits - the first with the middle, and the first with the last, and the middle with the last. For instance, pH readings of 6.92, 6.95, and 7.00 would be sufficient.
- o Even though there are no guidelines for turbidity, the measurements should be less than 10 NTU, or meet the baseline level established during development, upon completion of purging. Check with project manager if you use the baseline turbidity level.
- o Prior to sampling document recovery time by measuring the water level in each well to prove that at least 80% recovery has occurred.
- o A trip blank must be collected.
- o In the comments column of the chain of custody, write " Prepare laboratory report in WIP format."

#### San Diego Department of Health Services Groundwater Sampling Requirements

- o SDDHS does not encourage purging wells until dry.
- o Purge one borehole volume of water if recovery is fast, collecting pH/temperature/conductivity measurements while purging, then remove an additional one-half borehole volume of water. If the first and second measurements vary by less than 10%, purging is considered adequate. If not,

keep purging water in one-half borehole volume increments until the measurements vary by less than 10%, or three borehole volumes have been removed. Obtain three consecutive pH/temperature/conductivity measurements that are within 10% of each other.

- o If recovery is slow (water does not recover to 80% of original level within two hours) purge only one borehole volume of water.
- o Prior to sampling document recovery time by measuring the water level in each well to prove that at least 80% recovery has occurred.

Ventura County Environmental Health Division  
Groundwater Sampling Requirements

- o A trip blank and a duplicate sample must be analyzed for each site.
- o Custody seals must be placed over the cap of each sample.

Under certain conditions the calculated purge volumes will need to be calculated in borehole volumes instead of well casings volumes. Use the following to calculate borehole volume in gallons.

<u>Well I.D.</u>	<u>Bore Volume</u>
2"	0.90 gal/ft. in water
4"/or nested wells	1.70 gal/ft. in water

The completed groundwater sampling log must contain:

- pH/temp./conductivity and turbidity measurements indicating stabilization
- time and volume of water removed at each pH/temp./conductivity measurements
- total volume of water purged
- name of personnel performing sampling
- date and project number
- problems or unusual conditions arising during purging or sampling, such as the well going dry during purging, water in the well vault, missing well caps or locks, odors, appearance of purge water, etc.
- 80% recovery measurement and time of measurement after purging and before sampling

All chains of custody for the client's groundwater sites must contain the consultant work release number, station identification number and client contact among the other items to be filled out. Check the groundwater sampling field log and chain of custody for completeness, accuracy and neatness. If you have any questions, call!!!

Make sure that the date and time of relinquished and accepted at the lab are the same on the chain of custody. Also, make sure the lab fills in the sample condition information and signs for the samples on the chain of custody

Santa Barbara County Environmental Health Services  
Groundwater Monitoring Guidelines

I. Groundwater Monitoring

- A. Groundwater levels are to be monitored/measured in **all wells** in a short timespan.
- B. Measure the groundwater levels (correct for "free product" thickness).
- C. Use a clear bailer to check for the presence of "floating product," sheen, and odors.
- D. Replace well cover until ready to purge well.

## II. Purging

- A. Amount: generally 3 to 5 (no more than 10) well volumes; via bailer, pumps, or vacuum truck.
- B. Parameters (pH, temperature, conductivity) shall stabilize while purging.
  - 1. Measure the parameters of a small volume (i.e., a 500 ml) of the water as it is removed from the well. Measure the parameters initially and at regular volume intervals (e.g., after every well casing volume). More frequent testing may be needed if the well is known to go dry.
  - 2. Wells must be allowed to recharge prior to sampling (see section G of the Santa Barbara County LUFT Manual).
- C. Slow recharging wells are wells that are purged dry before removing 3 well volumes of water, and take more than **two (2)** hours to recharge.
  - 1. Note this on the field records and estimate the number of well volumes removed.
  - 2. Allow the well to recharge a minimum of two (2) feet and then sample.
  - 3. **Sample wells no later than 24 hours after purging.**
  - 4. Note the water level and percentage of recharge in the report.

## III. Sample Collection

- A. Use either a decontaminated teflon, stainless steel, or disposable bailer.
- B. Sample containers are to be supplied and certified by a laboratory:
  - 1. VOAs of 40 ml volume (2 per well); fill VOAs first to reduce volatilization.
  - 2. 4 oz sample containers for Pb (metallic lead) analysis (if needed).
- C. Fill containers by pouring along the inside of the vial to reduce volatilization.
- D. Form a positive meniscus with the water, to avoid trapping air, before placing the cap on the VOA. **Samples with headspace are not acceptable for analysis.**
  - 1. Check for bubbles by inverting and tapping gently to dislodge bubbles.
  - 2. If bubbles are found, uncap and repeat steps C and D.
- E. Label all samples and store immediately in an ice chest at 4 degrees celsius (blue ice).
- F. Be careful to properly decontaminate equipment between each and every well.